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REPORT NO. 13

# Cotton Fiber and Processing Test Results

CROP of

1972



Agricultural Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38117 February 2, 1973

This is the thirteenth of a series of reports of fiber and processing test results from the 1972 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, crop of 1971", April 1972. These reports are published by the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, P. O. Box 17723, Memphis, TN 38117.



## COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1972

### Discussion of Test Results

Cotton testing laboratories of the Agricultural Marketing Service, USDA, report that fibers from the Southwest short staple samples are longer and coarser than through the same date last year. Shirley Analyzer nonlint content and picker and card waste are lower than last season. Yarns spun from these samples are stronger and have higher appearance grades. Yarn imperfections are considerably less than a year ago. Average spinning potential yarn number is higher.

Averages for all medium staple samples tested through January 26 show stronger zero gage fiber strength while 1/8" gage is the same as last year. Yarns spun from these samples show fewer imperfections.

Medium staple samples tested from the Southeast show stronger fiber than a year ago. Yarns spun from these samples are stronger and show lower appearance grades. Fewer imperfections were noted this year. Average spinning potential yarn number is higher.

South Central medium staple samples tested to date are shorter and stronger than last year. Yarns spun from these samples show about the same test results as a year ago.

Medium staple samples from the Southwest are longer and show weaker fiber strength at zero gage than a year ago. Yarns spun from these samples have fewer imperfections this season compared to last season. Average spinning potential yarn number is higher.

Medium staple samples from the West show shorter, coarser and weaker fibers than through the same period a year ago. Yarns spun from these samples are weaker with fewer imperfections. Average spinning potential yarn number is lower.

Averages for all long staple samples tested to date are stronger at zero gage strength than last season. Picker and card waste and comber waste are lower than a year ago. Yarns spun from these samples show lower appearance grades. Average spinning potential yarn number is higher.

Long staple samples from the Southeast are shorter and stronger through the comparable period a year ago. Shirley Analyzer nonlint content is lower as is picker and card waste. Yarns spun from these samples are stronger with lower yarn appearance grades and more imperfections. Average spinning potential yarn number is higher this season.

Samples tested from the South Central long staple group show samples to be shorter, finer and stronger than a year ago. Shirley Analyzer nonlint content and picker and card waste are both lower this season. Yarns spun from these test samples indicate lower appearance grade than a year ago. Average spinning potential yarn number is higher.

Long staple samples from the West show approximately the same fiber test results as last season. Picker and card waste and comber waste are both lower than a year ago. Yarns spun from these samples to date show about the same yarn quality results as last year. Average spinning potential yarn number is higher.

No additional extra long staple American upland lots of samples were received during this report period.

Extra long staple, American Pima, samples from the West are finer and weaker than a year ago. Picker and card waste is less than last season.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States  
through January 26, 1973 1/

Staple group Area, and Crop year	Lots tested	Fiber test results							Processing test results								
		Fibrograph		Pct.	Rdg.	Mpsi	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.			
		2.5% span	50/2.5 unif.				Mike fine- ness	Zero gage			1/8" gage	G/tex	Pct.		Skein str.	Appear- ance	Imperf- ections
No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Lbs.	Index	No.	Yarn No.							
22s Carded Yarn																	
Short Staple: Southwest 1971 1972	65	0.95	45	3.8	79	20	4.4	7.2	86	112	40	37					
	53	0.98	45	4.1	80	21	3.6	6.7	94	117	27	46					
Medium Staple: Southeast 1971 1972	68	1.08	45	4.4	79	22	3.4	6.6	99	109	20	61					
	61	1.08	45	4.3	83	23	3.0	6.2	104	104	16	66					
South Central 1971 1972	142	1.10	44	4.3	81	22	3.0	5.9	103	112	20	62					
	160	1.08	45	4.3	83	23	2.8	6.2	102	109	19	64					
Southwest 1971 1972	46	1.04	44	4.0	84	22	3.8	6.5	102	113	35	55					
	49	1.06	45	4.1	82	22	3.5	6.6	100	113	28	60					
West 1971 1972	60	1.12	45	4.2	92	25	2.7	5.3	121	120	24	70					
	60	1.09	45	4.4	90	24	2.6	5.5	110	121	17	66					
U. S. Average 1971 1972	316	1.09	44	4.3	83	23	3.1	6.0	105	113	23	62					
	330	1.08	45	4.3	85	23	3.0	6.1	104	112	20	64					
Significant dif- ference <u>2/</u>		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3					

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States  
through January 26, 1973  
1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results										SPY
		Length		Mike	Strength Zero gage	SA Non- lint	P&C Waste	Comber Waste	Yarn Quality					No.				
		Span	Unif						Strength carded	combed	Appearance carded	Imprfctns card	combed					
No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.			
<u>Long Staple:</u>																		
Southeast																		
1971	16	1.14	43	4.3	79	22	4.2	9.7	17.2	102	118	109	118	22	10	65		
1972	19	1.12	44	4.3	85	24	3.6	8.5	16.9	107	123	102	117	24	10	68		
South Central																		
1971	3	1.22	43	4.5	83	24	5.3	9.6	16.4	113	130	107	117	20	9	70		
1972	4	1.16	44	4.0	88	24	4.2	8.8	16.0	116	131	100	110	20	11	75		
West																		
1971	15	1.16	44	3.5	92	25	2.4	8.8	17.3	127	146	95	103	27	15	77		
1972	15	1.17	44	3.6	91	25	2.5	7.2	15.6	126	145	91	100	26	13	86		
U. S. Average																		
1971	34	1.16	43	4.0	85	24	3.5	9.3	17.2	114	131	103	111	24	12	71		
1972	38	1.15	44	4.0	88	24	3.4	8.2	16.2	116	133	98	109	23	11	76		
<u>Array</u>																		
American Upland																		
<u>50s Combed Yarn</u>																		
Extra Long Staple:																		
West																		
1971	2	1.41	30	4.0	105	30	2.0	8.2	16.0		66		100		10			
1972	2	1.40	32	4.0	104	33	2.4	8.4	16.6		64		100		6			
American Pima																		
West																		
1971	24	1.45	31	3.8	99	33	2.7	8.5	17.6		65		112		4			
1972	21	1.44	32	3.6	97	32	2.7	7.9	17.7		63		113		3			
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3		

Array

American Upland

50s Combed Yarn

American Pima

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are  
based upon averages of a number of lots and are not applicable to individual samples.



Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns											
				Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct's		Spin. Potent-ial		
							2.5% span	Unif		Zero Gage	1/8" Gage	Pct	Pct		Gra	Yel	8s or 74 tx	Lbs	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx		8s or 74 tx	22sor 27 tx
No	Grade	Stple	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Pct	Pct	No	No	No	No	No				
SOUTHWEST AREA																									
NORTHWEST TEXAS																									
BIG SPRING																									
3 SLM	41	31	0.97	46		4.0	78	WEST. STORMPROOF	20	5.9	2.5	2	3	6.1	304	94	7.0	5.9	130	120	33	22	45		
BROWNFIELD																									
2 SLM LT SP	42	32	1.01	44		3.5	71	LANKART 57	19	7.8	3.8	2	3	6.8	302	92	8.7	7.3	120	110	59	41	48		
BURKBURNETT																									
3 SLM LT SP	42	32	0.99	45		5.0	80	LANKART LX-571	22	6.2	3.0	4	4	6.9	294	91	6.7	5.9	130	120	29	20	44		
COTTON CENTER																									
3 LM SP	53 1/2	32	0.92	44		3.0	76	STRIPPER 31	21	6.8	7.4	5	6	9.5	313	93	8.1	6.9	120	110	65	46	37		
LOCKNEY																									
3 SLM	41	31	0.95	44		3.8	73	STRIPPER 31	20	6.6	3.4	2	3	7.7	312	92	7.9	6.6	120	120	39	22	43		
PADUCAH																									
3 SLM LT SP	42	32	1.06	43		4.2	72	LANKART 57	21	6.9	3.6	4	4	7.2	299	91	7.6	6.6	120	120	50	33	51		
RULE																									
3 SLM LT SP	42	32	1.04	44		4.9	78	LANKART LX 571	21	6.6	3.2	3	3	6.2	305	95	7.2	6.1	120	120	30	19	48		
SEMINOLE																									
2 SLM LT SP	42	32	0.97	47		4.3	78	STRIPPER 31	20	6.9	3.8	3	3	7.3	307	91	7.9	6.4	120	120	43	28	43		
OKLAHOMA																									
ALTUS																									
3 SLM LT SP	42	32	1.01	45		4.2	75	LANKART 57	20	7.0	3.4	3	3	6.6	310	94	7.8	6.7	130	120	29	16	48		

\* 100 percent selected for tests, less than 100 percent in the area  
 1/ Reduced from 43 because of bark



Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns													
Grade		Stple		Digital Fibrograph		Mike		Fiber Strength		Elon-gat'n		S.A. Non-Lint		Color Raw Stock		P & C Waste		Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potential	
No	Name & Code	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	Pct	Pct	No	No	Gra	Yel	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	22s or 27 tx	50s or 12 tx	No	No
SOUTHEASTERN AREA																											
NORTH CAROLINA																											
LAURINBURG																											
4	LM LT SP	52	35	1.10	46	3.8	78	23	7.6	4.3	4	3				100 PERCENT		38	6.5	5.2	110	100	18	12	63		
McNAIR 511																											
SOUTHWEST AREA																											
NORTHWEST TEXAS																											
ACKERLY																											
3	LM LT SP	52 1/2	32	0.97	43	2.6	78	20	6.8	7.1	3	5				70 PERCENT		32	6.5	4.8	100	80	64	45	50		
LOCKETT 4789																											
LANESA																											
3	LM LT SP	52 1/2	32	0.93	41	2.7	77	20	6.6	6.8	3	3				70 PERCENT		26 1/2	6.0	5.0	80	70	61	56	25 3/4		
PAYMASTER 111																											
LUBBOCK																											
2	S LM	41	35	1.15	40	3.4	75	22	7.2	3.2	1	3				100 PERCENT*		40	7.0	5.4	110	80	48	43	61		
3	S LM LT SP	42	35	1.11	40	3.1	79	22	7.0	4.0	2	4				6.8 105		38	7.1	5.4	80	70	47	38	59		
COKER 312																											
LUBBOCK																											
3	S LM LT SP	42	34	1.10	40	2.7	75	21	7.4	4.8	2	4				100 PERCENT*		37	7.5	5.8	70	60	72	59	58		
COKER 5110																											
RAYLAND																											
3	S LM LT SP	42	33	1.06	45	4.6	88	23	6.2	4.4	3	3				100 PERCENT*		36	5.9	4.4	120	100	26	20	60		
LOCKETT 4789-A																											
VERNON																											
3	LM	51	33	1.06	45	4.8	87	23	6.1	4.5	4	3				100 PERCENT		37	5.8	4.3	120	100	20	12	57		
LOCKETT 8XL																											

\* 100 percent selected for tests, less than 100 percent in the area

1/ Reduced from 42 because of bark

2/ End breakage too high to spin 50s yarn. 44s yarn spun and strength adjusted to equivalent of 50s

3/ This is an estimated value below the range of the test

Table 4 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns									
				Array Length		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color		Comber Waste	P & C Waste	Strength		Elongation		Appearance		Imprfect'ns		
											Raw Stock	Gr-a			Yel	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx			80s or 7 tx
				No	Grade	Stple	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	No	No
WESTERN AREA																							
ARIZONA																							
CASA GRANDE																							
3	4	44		1.41	32	3.6	95	32	6.7	2.9	3	4	70 PERCENT 8.8	18.4	66	36	5.3	4.7	110	120	1	1	